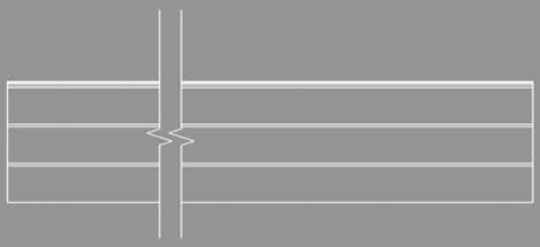
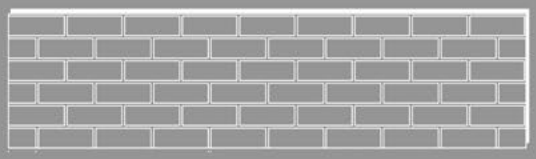


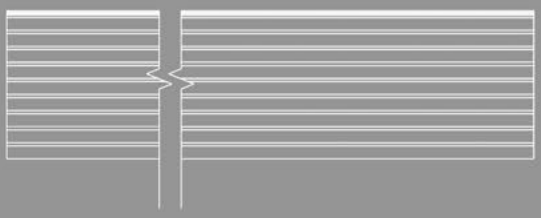


NICHIHA

ARCHITECTURAL WALL PANELS

DESIGN REVIEW GUIDE

AWP 1818 | HORIZONTAL
AWP 3030 | HORIZONTAL + VERTICAL



FEBRUARY 2026

AWP DESIGN GUIDE

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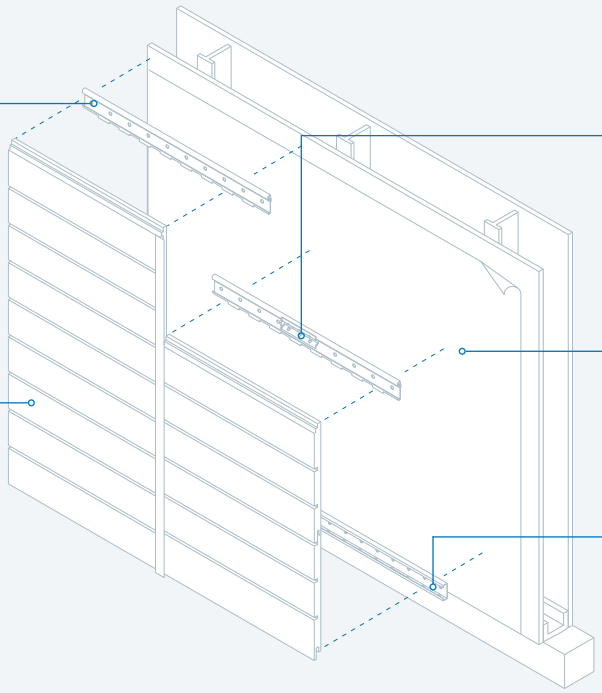
Always install products in accordance with the latest installation guidelines and all applicable building codes and other laws, rules, regulations and ordinances. Review all installation instructions and other applicable product documents before installation.

Efficient installation. Rainscreen performance.

THE ULTIMATE CLIP
creates a hidden fastening system that all but eliminates face fastening. Installation is quick and easy and never requires specialty subcontractors.

NICHIHA ARCHITECTURAL WALL PANELS
are lightweight, easy to handle, and available in a virtually endless color palette and a diverse offering of textural finishes.



NICHIHA'S JOINT TAB ATTACHMENT
is designed to support panel lateral stability, helping vertical joints stay tightly closed. The tab fits in place easily and is fastened to the Ultimate Clip with provided screw.

DRAINED AND BACK-VENTILATED RAINSCREEN
design allows water to escape and air to circulate, reducing the risk of mold and water damage inside the building.

THE ULTIMATE STARTER TRACK
pulls double duty. It ensures a fast, level installation, and its patented drainage channel directs water out and away from the base of the wall.

EASY INSTALLATION

Time-saving clip installation system that reduces construction time and minimizes mistakes.

NO MORTAR, NO MESS

Prefinished panels eliminate the need for messy mortar or costly masonry-skilled labor.

ANY-WEATHER PRODUCT

Products can be installed year round in any climate across the country. No geographical restrictions mean more possibilities.

LOW MAINTENANCE

No-fuss products. Little ongoing cleaning or regular maintenance needed. Bring your vision to life and ensure it looks great for years to come.

ENGINEERED FOR PERFORMANCE

Go beyond our durable panels and discover a meticulously engineered moisture management system that provides a vertical drainage point for air and moisture to exit.

THE PRODUCTS

Before you jump into the design process, we recommend taking a minute to familiarize yourself with the dimensions of Nichiha's family of Architectural Wall Panels. All panels have the same height (455mm) but are either 1818mm or 3030mm wide.

AWP 1818

Horizontal Installation Allowed

Stacked or Staggered Layout (Horizontal)

Dimensions: *17-7/8" [H] x 71-9/16" [L]*

455mm [H] x 1818mm [L]

Thickness (unless noted): *5/8" (16mm)*

ArchitecturalBlock
CanyonBrick
Illumination[c]
Miraia
Novenary *7/8" Thickness*
PlymouthBrick
RiftSawn *3/4" Thickness*
SandStone *3/4" Thickness*
TuffBlock[c]
VintageBrick *3/4" Thickness*
VintageWood
Natura
Corbosa
VintageWood Smooth
Modern Brick

AWP 3030

Horizontal or Vertical Installation Allowed

Stacked Layout Only (Horizontal)

*Staggered option for vertical

Dimensions: *17-7/8" [H] x 119-5/16" [L]*

455mm [H] x 3030mm [L]

Thickness: *5/8" (16mm)*

EmpireBlock
Illumination
IndustrialBlock
Ribbed
RoughSawn
VintageWood Smooth

Nichiha's **Architectural Detail Finder** is ready to help with all your detailing needs and is found at nichiha.com/architectural-details. Panel dimension profiles, installation components & accessories, trims, and wall details for many assembly types and conditions are available in AutoCAD, Revit, and PDF.

COMPATIBILITY BETWEEN PANEL TYPES

NICHIHA AWP 1818 VERSUS AWP 3030

AWP 1818 have shiplap edges on all four sides and the panels joint directly with each other. The vertical joints may be aligned or staggered with each course. Because of their shape, AWP 1818 can only be installed horizontally.

AWP 3030 have shiplap edges only on the long dimension. The short edges are square cut. This enables a vertical installation option for AWP 3030 with a different Starter Track (FA710T). However, it also requires all vertical joints to align when the panels are installed horizontally. This means an AWP 3030 layout can *only* be stacked. The vertical joints must use the Double Flange Sealant Backer with sealant or H-Mold Trim.

GROUPING 1818 & 3030 PANELS:

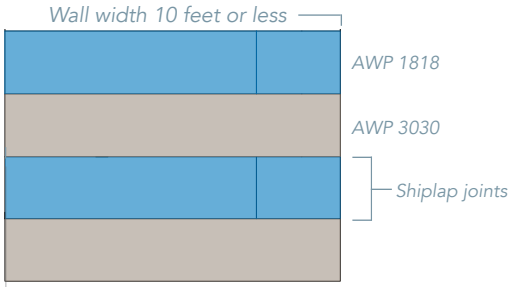
The difference of the vertical edge jointing means AWP 1818 and AWP 3030 can only be matched directly together in a mixed arrangement on walls 10 feet or less in width so that AWP3030 will not require any vertical joints. (Elevation A)

On walls sections wider than 10 feet, the two sizes can be used together only if the AWP 3030 is grouped *below* the AWP 1818. (Elevation B)

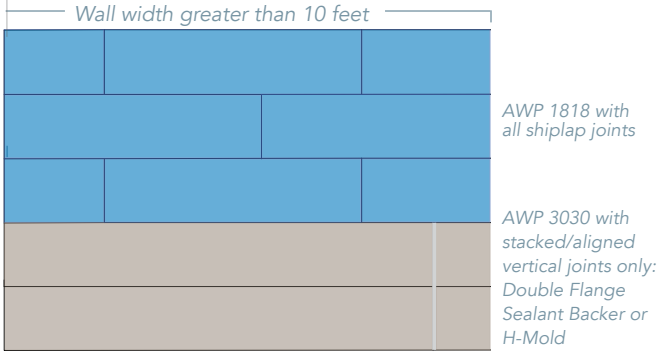
AWP 1818 THICKNESSES

Imported SandStone and VintageBrick (3/4") require use of the JEL788 Ultimate Clip, which accounts for a thicker panel edge. All other panels, including Novenary Tile (7/8") and RiftSawn (3/4") are designed with edges compatible with the JEL778 Ultimate Clip. Because of the difference in edge thicknesses and required clips, imported SandStone and VintageBrick cannot be jointed directly with any other AWP profiles. These two panels must be separated from all other panel types by Horizontal/Compression Joints and Vertical Control/Expansion Joints.

Novenary Tile (7/8") panels joint normally with any 5/8"thick AWP 1818 on all four sides.



A) 16mm & 21mm AWP 1818 and AWP 3030 mixed on walls ten feet or less in width.



B) 16mm & 21mm AWP 1818 and AWP 3030 together on walls wider than ten feet. 1818's grouped on top with 3030's below only.

AWP 1818 JOINT PROFILES

V-Groove: Architectural Block, Illumination 1818

Split V-Groove: TuffBlock, EmpireBlock, IndustrialBlock

Soft U: Illumination 3030

Implications: Illumination 3030 meeting Illumination 1818 or ArchitecturalBlock at a corner will result in different neighboring joint aesthetics. The same is true where TuffBlock may neighbor Illumination 1818 or ArchitecturalBlock.

These are joint profiles for Illumination 1818 or Architectual Block (left) with a V-Groove joint versus TuffBlock (right) with a Split V-Groove.

PLANNING & LAYOUT

The Nichiha system works most efficiently when full panels are used. Designing panel layouts symmetrically from a wall center, outwards will help to create less product waste. It is important to keep in mind the actual metric dimensions when considering the modular panel layout, including placement of control and compression joints, and also with respect to sizing window and door openings.

Detailing around openings involves a number of variables such as the depth of the opening and the overall thickness of the wall assembly. For example, a continuous insulation and furring condition with recessed windows will necessitate a jamb, head, and sill return material/finish. Depending on the dimensions, Nichiha factory Corners or cut panels may be used at jambs, or an alternate material such as metal may be necessary. Nichiha Corners may not be used for head and sill return conditions. Please reach out to Nichiha Technical for detailing recommendations.

VERTICAL CONTROL/ EXPANSION JOINT REQUIREMENTS

On walls wider than 30 feet, when using AWP 1818 panels and metal trim outside corners, Vertical Control/Expansion Joints (Double Flange Sealant Backers) are required within 2 to 12 feet of outside corners (on both sides of corner) and then approximately every 30 feet thereafter.

When using AWP 1818 panels and Nichiha factory Corners, control joints are required at the factory Corner and then approximately every 30 feet thereafter.

When using AWP 3030 panels installed horizontally, vertical control joints or H-molds are required at each vertical joint. Panels may not be butted together and these vertical joints may not be split up or staggered.

Control/Expansion Joints are 10mm (3/8”) wide.

HORIZONTAL/COMPRESSION JOINT REQUIREMENTS

Metal Framed projects taller than three stories: Place compression joints every other floor.

Wood Framed projects three stories or taller: Compression Joints required at each floor.

Compression Joint requirements:
Compression Joint Flashing - heavy gauge z-shaped metal flashing or similar, 1/2" (min.) gap between panels at floor lines/plate, and Starter Track.

Installed Horizontal/Compression Joint examples

CONTINUOUS INSULATION

Nichiha AWP Horizontal AWP may be installed directly over up to one inch of foam plastic insulation such as polyiso or XPS over wood or gypsum sheathing. Insulation compressive strength of 15 psi or greater is required. ***For horizontal panels***, continuous insulation (c.i.) thicker than one inch or mineral wool c.i. of any thickness must be paired with a furring or other solution to satisfy the *Framing & Sheathing Requirements* set out in the AWP install guides. ***For vertical panels***, the presence of any c.i. requires an assembly adjustment and is subject to a required Technical Review process. Refer to the guides for complete installation requirements and instructions. This document is not intended to prohibit options or furring combinations not covered herein. Please contact the Technical Department for assistance.

Exterior Continuous Insulation Requirements

Horizontal Panel Installation

(With any c.i. > 1" or any c.i. with less than 15 psi compressive strength)

Shaped Metal Furrings
(Z, hat channel, C, etc.), Min. 18 ga.
-or-
2x P.T. Lumber
-or-
Energy Code Option
-with-
Furring aligned vertically at 16" o.c. (max)

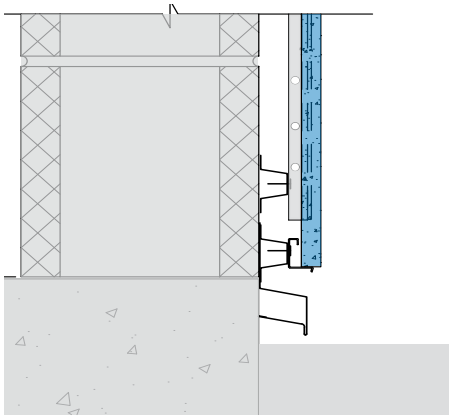
Vertical Panel Installation

Horizontal furring can be used as a direct attachment. The Furring must be a min 18 ga shaped steel, (Z, hat channel, c, etc) spaced at 16" OC. Max. A horizontal hat channel is required at all starter track locations. No wood furring allowed.

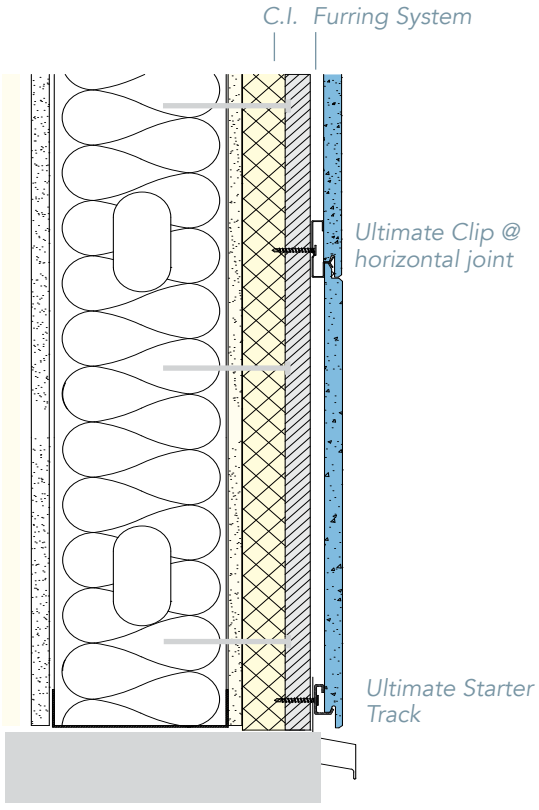
*Consult a structural engineer to design the furring system to manage the AWP system dead load of minimum 5 psf and also meet the project wind load design criteria. Furring must account for expected building compression. Nichiha does not provide fastener design for anchoring the furring to structure. Refer to the International Building Code (IBC) for more info.

NFPA 285 and Hourly Ratings

Refer to Intertek CCRR 0299 and our Priest Associates engineering evaluations for NFPA 285 compliant and hourly-rated assemblies.



Horizontal Hat Channels: 16" o.c. horizontal furring allows Ultimate Clips to fasten to these members 16" o.c. (vertically).



Section view: AWP System on vertical furring

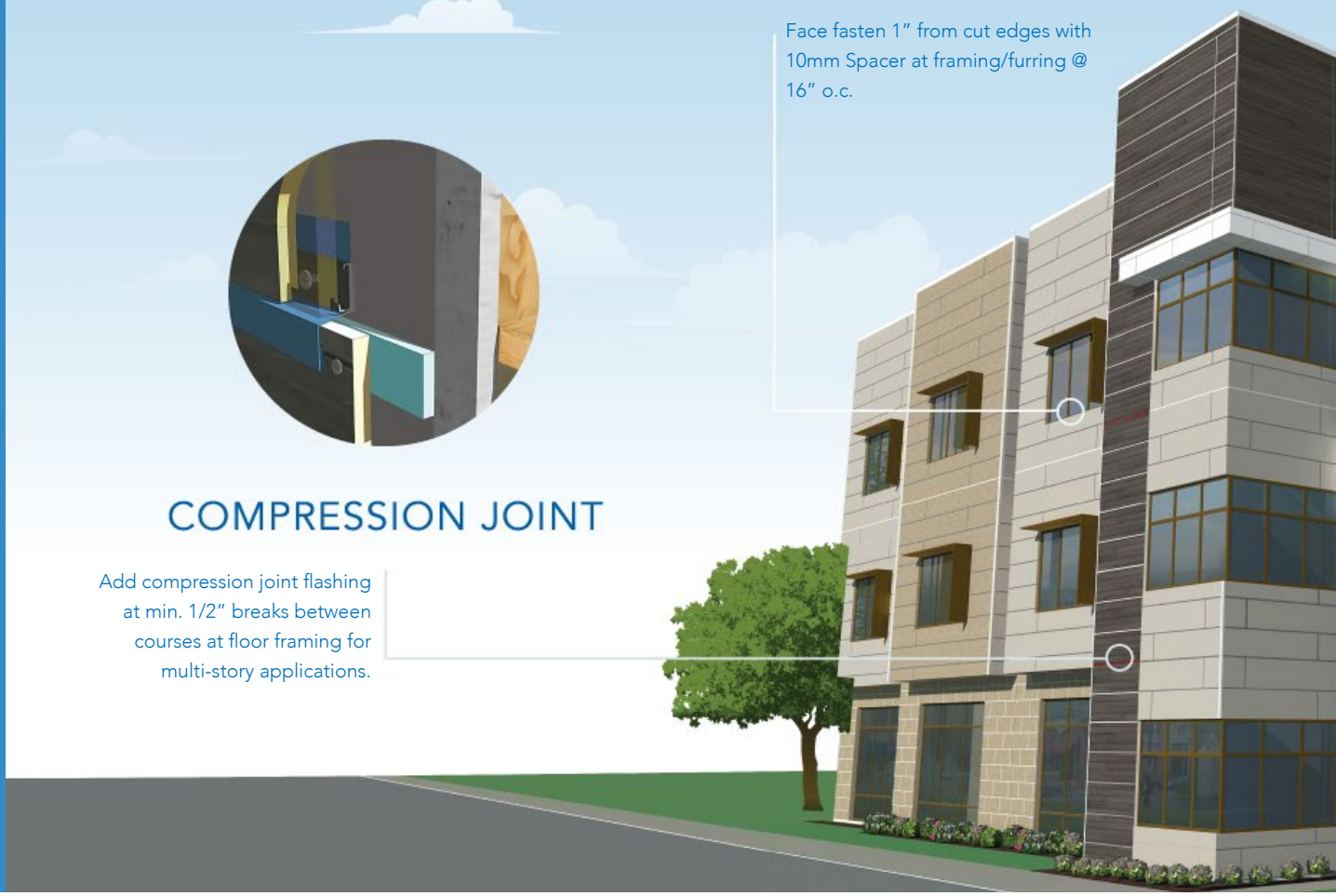
ARCHITECTURAL LAYOUT

WINDOW SILL

Face fasten 1" from cut edges with 10mm Spacer at framing/furring @ 16" o.c.

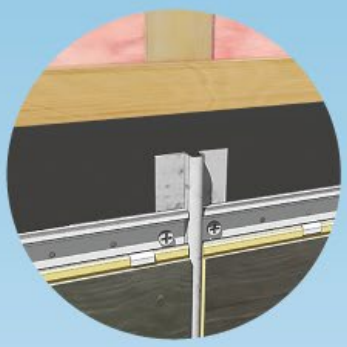
COMPRESSION JOINT

Add compression joint flashing at min. 1/2" breaks between courses at floor framing for multi-story applications.



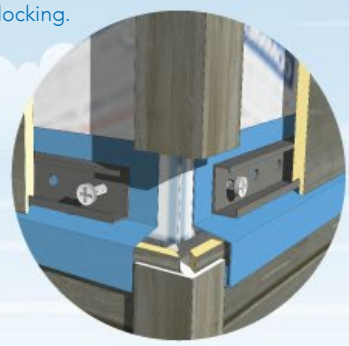
INSIDE CORNER

Butt line-of-sight panels to corner. On opposite wall, add Single Flange Sealant Backer and caulk or use Inside Corner metal trim.



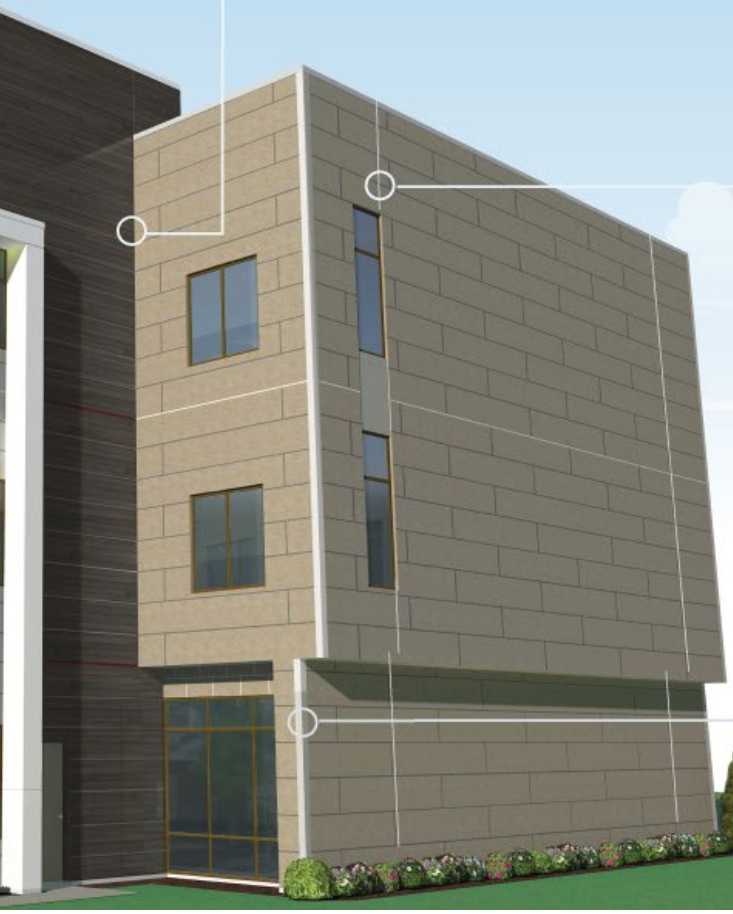
VERTICAL CONTROL JOINT

Often aligned with window jambs, Double Flange Sealant Backer is fastened to framing/furring, wood sheathing, or blocking.



OUTSIDE CORNER

- Factory Corners with 3-1/2" Face Returns
- Corner Key Trim
- Open Outside Corner Trim
- Fiber Cement Trim Boards



HORIZONTAL DESIGN REQUIREMENTS

AWP 1818 – HORIZONTAL

- Ultimate Horizontal Starter Track - ***always level***
- Ultimate Clip II – JEL778 for most panels (JEL788 for SandStone and VintageBrick only) - 2-1/2 clips per panel edge | 10mm (~3/8") rain screen
- Joint Tab Attachments required between panels at vertical factory joints
- Vertical Control/Expansion Joints (Double Flange Sealant Backer) on 30'+ walls with metal trim outside corners: 2'-12' from edges + every ~30' thereafter
- Vertical Control/Expansion Joints with Nichiha Corners plus every ~30' thereafter
- Vertical Control/Expansion Joints every ~30' on walls with no outside corners.
- Horizontal/Compression Joints: ***Wood Framing*** three stories or more = joint at every floor
- Horizontal/Compression Joints: ***Metal Framing*** over three stories= joint about every every other floor
- Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
- Horizontally cut edges require face fastening with shim
- MIN. Clearances: 6" above soil grade, 2" above hardscape and decking, 1" above roof
- 1/4" clearance between the panel edge and flashings
- Panel Thickness – 16-21mm | 5/8" - 7/8"
- Total System Depth – 26mm - 31mm | 1-1/32" - 1-7/32"

See table for Framing & Sheathing Requirements

Reference page 4 for panel thickness

HORIZONTAL AWP CONTINUOUS INSULATION REQUIREMENTS

Exterior Continuous Insulation Requirements	Horizontal Panel Installation
Greater than 1 inch	(With any c.i. > 1" or any c.i. with less than 15 psi compressive strength) Shaped Metal Furrings (Z, hat channel, C, etc.), Min. 18 ga. -or- 2x P.T. Lumber -or- Energy Code Option -with- Furring aligned vertically at 16"o.c.(max)

AWP 3030 – HORIZONTAL

- Ultimate Horizontal Starter Track - ***always level***
- Ultimate Clip II – JEL778 for all 3030mm panels - 4 clips per panel edge | 10mm (~3/8") rain screen
- Vertical Control/Expansion Joints (Double Flange Sealant Backer) or H-Mold trim at each vertical joint
- Stacked layout only - no staggering of vertical joints
- Horizontal/Compression Joints: ***Wood Framing*** three stories or more = joint at every floor
- Horizontal/Compression Joints: ***Metal Framing*** over three stories = joint about every other floor
- Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
- Horizontally cut edges require face fastening with Spacer
- MIN. Clearances: 6" above soil grade, 2" above hardscape and decking, 1" above roof
- 1/4" clearance between the panel edge and flashings
- Panel Thickness – 16mm | 5/8"
- Total Wall System Depth – 26mm | 1-1/32"

See table for Framing & Sheathing Requirements

HORIZONTAL AWP FRAMING & SHEATHING REQUIREMENTS

WALL TYPES	ATTRIBUTES	STUD SPACING	SHEATHING
Metal Studs	18 gauge min.	16" o.c. max.	Min. 7/16" OSB/Plywood 1/2" or 5/8" Gypsum
Wood Studs	2X Lumber	16" o.c. max.	Min. 7/16" OSB/Plywood 1/2" or 5/8" Gypsum
Concrete Furring is required	18 ga shaped metal or P.T. 2X Lumber	N/A	N/A
SIPs & NailBase C.I.	N/A	N/A	MIN. 7/16" OSB/Plywood
PEMBs	24 gauge up to -31.41 PSF 22 gauge up to -39.29 PSF	Deflection Criteria: L/120 max. Fastening: #10 fastener @12" o.c.	

VERTICAL DESIGN REQUIREMENTS

AWP 3030 – VERTICAL

- Ultimate Vertical Starter Track - always level and continuous, bearing the dead loads of vertical AWP 3030, fastened 8" o.c. with every other fastener attaching to the vertical framing members. Required sheathing is a minimum 7/16" OSB or Plywood
- Contact the technical dep. for staggered option layout
- Ultimate Clip II – JEL778 for all 3030mm panels - 4 clips per panel edge | 10mm (~3/8") rain screen
- Vertical Control/Expansion Joints not required
- Horizontal/Compression Joints after each course
- Don't span floors
- Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
- Vertically cut edges require face fastening to structure, through shim
- MIN. Clearances: 6" above soil grade, 2" over hardscape and decking, 1" over roof
- 1/4" clearance between the panel edge and flashings
- Panel Thickness – 16mm | 5/8"
- Total System Depth – 26mm | 1-1/32"
- Structural Sheathing of 7/16" or thicker DOC PS2 or PS1 rated OSB or Plywood is required for direct fastening

See table for Framing & Sheathing requirements

VERTICAL AWP CONTINUOUS INSULATION REQUIREMENTS

WALL TYPES	ATTRIBUTES	STUD SPACING	SHEATHING
Metal Studs	18 gauge min.	16" o.c. max.	Min. 7/16" OSB/Plywood
Wood Studs	2X lumber	16" o.c. max.	Min. 7/16" OSB/Plywood
Concrete Furring is required	18 gauge shaped metal furring.	N/A	N/A
SIPs	Per SIP Standard (sips.org) and Vertical Starter Track must be fastened directly into solid lumber with min. 1" penetration		
PEMBs	Product not intended for this application		

VERTICAL AWP CONTINUOUS INSULATION REQUIREMENTS

Continuous Insulation – also refer to the installation guides.
For vertical AWP, the presence of ***any*** c.i. necessitates adjustments. Please contact the Technical Department.

Exterior Continuous Insulation Requirements

Standard Stud Walls w/ C.I. Shaped Metal Furring Grid Minimum 18 gauge steel horizontal shaped furring (Z, hat channel, C, etc.) with maximum 16" o.c. spacing. Minimum 18 gauge horizontal hat channel must be used at starter track to support the weight of the panels *no wood turning	**Standard Stud Walls w/ C.I.** Wood Sheathing added to Vertical Furring Furring: minimum 18 gauge shaped metal or 2X lumber Furring aligned vertically at 16" o.c. (max) - secured to wall framing -and- Min. 7/16" DOC PS1 or PS2 Rated Plywood/OSB - secured to furring -and- Code-approved WRB
CMU and Concrete Shaped Metal Furring Minimum 18 gauge - Aligned horizontally at 16" o.c. Additional vertical furring segments at Vertical Starter Track locations to enable 8" o.c. fastener spacing for track	**Specialty Third-Party Systems** Contact Nichiha Technical Department

TECHNICAL REQUIREMENTS

STANDARD REQUIREMENTS

Let's start with the basics. Each of the following criteria must be met in order for Nichiha Architectural Wall Panels to perform as intended.

- Refer to Intertek CCRR-0299 for product building code compliance certification as well as wind load engineering requirements. For this and other Nichiha product approvals for Florida, Miami-Dade, Texas TDI, and L.A.R.R., visit nichiha.com/resource-center, and select Product Certifications under the Design Support filter
- **Continuous Insulation** — refer to the installation guides
- **Vapor Permeable Weather Resistive Barriers** — required over stud walls and SIPs. CMU/concrete - defer to local code. Sheathings and C.I. with integrated code compliant WRB are acceptable
- Hardware, Corners, Trims, Flashings (nichiha.com/hardware-and-accessories)
- **Minimum Clearances** — a minimum of 6" above soil grade, 2" above hard surfaces, 1" above roofing, or per local building codes
- **Single Flange Sealant Backers** — at inside corners, along window & door jambs and transition points with other cladding
- **Double Flange Sealant Backers** — Vertical Control/Expansion joints, Non-90-Degree Corners and at Nichiha Corners
- **Sealants** — refer to *Technical Bulletin - Sealants*
- **10mm Spacer** — required at all face fastening locations
- **Face fastening** — every 12-16" o.c. to framing/furring spaced min. 1" distance from the panel edge
- **Fasteners must penetrate:** Wood Studs a min. 1", Metal Studs a min. 1/2" with three threads needed for grab
- **Fasteners** — must be stainless steel or corrosion resistant such as hot dipped zinc or ceramic coated - pan, wafer, or hex head required for clip and track fastening (min. #8)
- **Equipment/Mechanical Screens** - must be fully enclosed wall system
- **Soffit and Angled Wall** applications (with standard warranties) are prescribed in the *Horizontal AWP Install Guide*. See pages 39-42.

ADDITIONAL REQUIREMENTS

- Structural Insulating Panels (SIPs)
- Nail-base insulation sheathings
- Continuous Insulation (C.I.) greater than one inch in thickness
- Insulated Concrete Forms (ICFs) require additional measures
- Retrofits and atypical applications
- Modular or panelized wall structures

All of the above require a technical review by Nichiha to evaluate feasibility via our Technical Design Review (TDR) process. Submission of a TDR does not imply or guarantee project approval.

TECHNICAL DESIGN REVIEWS

If your project meets any of the criteria listed below, or you simply wish to take advantage of the service, your Nichiha Sales Representative can connect you to Technical Department staff for a Technical Design Review. It's our way of making your specification of Nichiha AWP as easy as possible. Refer to nichiha.com/technical-design-review.

- Any project of more than three stories or 45 feet
- Those located in high wind coastal areas (Exposure Categories C and D with Wind Speed in excess of 130 mph (Vult) per ASCE 7-10)
- Those with any wall assembly not described in the *Framing & Sheathing Requirements*
- *Continuous Insulation* projects

NOs

If your project includes any of the following attributes, contact Nichiha Technical Services for clarification and advice. Refer also to Technical Bulletins in our Resource Center under the Install Support filter.

- No Radius/Curved Walls
- No existing or new masonry w/o furring
- No remodels over hard coat & synthetic stucco/ EIFS
- No Pre Engineered Metal Building retrofits. New construction only with horizontal installation, no vertical installation allowed
- Do not use AWP on *open* screen walls
- Do not cut panels to less than 4" in width or length
- For Vertical Panels: do not span floors with panels. Place compression joints at each floor line.

DETAILS

For complete offerings of AutoCAD and Revit details visit nichiha.com/architectural-details

For Code Compliance, product testing, installation hardware, accessories, and full installation requirements/details visit: nichiha.com/resource-center

TechnicalServices@nichiha.com | Phone: 866-424-4421

THE POWER OF POSSIBILITIES

At Nichiha USA we value genuine relationships, bold ideas and a willingness to evolve into a better version of ourselves as we create better spaces for all to enjoy. Our visually stunning, high-performing building materials and incomparable service to our partners may set us apart, but we are proud to be a part of a global, vibrant building community.

Nichiha USA is a subsidiary of Nichiha Corporation. Founded in Japan in 1956, Nichiha now has over 2800 employees in 13 locations worldwide. As we continue to grow, we keep our overarching goal in mind: Building a Better Human Environment. Learn more about our global presence at: nichiha.co.jp/global.

NICHIHA WARRANTIES AND CERTIFICATIONS

WUI

CCRR-0299

Canada CCMC

NOA

Build America, Buy America Compliant

SILICA DUST WARNING: Nichiha products may contain some amounts of crystalline silica [a.k.a. sand, silicon dioxide], which is a naturally occurring mineral. The amount will vary from product to product. Inhalation of crystalline silica into the lungs and repeated exposure to silica can cause health disorders, such as silicosis, lung cancer, or death depending upon various factors. To be conservative, Nichiha recommends that whenever cutting, sawing, sanding, sniping or abrading the product, users observe Safety Instructions. For further information or questions, please consult the MSDS, your employer, or visit osha.gov/SLTC/silicacrystalline/index.html and cdc.gov/niosh/topics/silica. The MSDS for Nichiha products are available at nichiha.com, at your local Nichiha dealer or through Nichiha directly at 1.866.424.4421. FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND OTHER INSTRUCTION MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

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NICHIHA.COM

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